

**AMENDMENTS TO THE CLAIMS**

Claims 1 to 7 (canceled)

Claim 8 (Currently amended): A feed comprising a phytase made by a method comprising the following steps:

- (a) providing a nucleic acid derived from ~~an *E. coli*~~ a bacteria, wherein the nucleic acid encodes a polypeptide having a phytase activity;
- (b) providing a composition comprising a feed;
- (c) expressing the nucleic acid under conditions which allow expression of the phytase;
- (d) mixing the phytase of (c) with the composition of (b), thereby making a feed comprising a phytase.

Claim 9 (Previously presented): The feed of claim 8, wherein the nucleic acid is expressed *in vitro*.

Claim 10 (Previously presented): The feed of claim 8, wherein the nucleic acid is expressed in a cell.

Claim 11 (Previously presented): The feed of claim 10, wherein the nucleic acid is expressed in a yeast cell under conditions which allow expression of the enzyme in the yeast cell.

Claim 12 (Currently amended): The feed of claim 8, wherein the nucleic acid has a sequence as set forth in:

- a) SEQ ID NO:1[[,]]; or
- b) SEQ ID NO:1, wherein T is substituted with U; or
- c) SEQ ID NO:1 from nucleotide 1 to 1296; or
- d) SEQ ID NO:1 from nucleotide 1 to 1296, wherein T is substituted with U;  
or wherein the polypeptide has an amino acid sequence as set forth in;
- e) SEQ ID NO:2; or

f) SEQ ID NO: 2 from amino acids 1 to 432.

Claim 13 (Currently amended): A feed comprising a recombinant phytase, wherein the recombinant phytase is encoded by a nucleic acid derived from ~~an *E. coli*~~ a bacteria.

Claim 14 (Currently amended): The feed of claim 13, wherein the phytase is encoded by a nucleic acid having a sequence as set forth in:

- a) SEQ ID NO:1[[,]]; or
- b) SEQ ID NO:1, wherein T is substituted with U; or
- c) SEQ ID NO:1 from nucleotide 1 to 1296; or
- d) SEQ ID NO:1 from nucleotide 1 to 1296, wherein T is substituted with U;

or wherein the phytase has an amino acid sequence as set forth in:

- e) SEQ ID NO:2; or
- f) SEQ ID NO: 2 from amino acids 1 to 432.

Claim 15 (Previously presented): A method for treating a feed comprising a phytate to lower the phytate content in the feed and increasing the amount of inorganic phosphorous in the feed comprising the following steps:

- (a) providing a recombinant phytase encoded by a nucleic acid derived from an *E. coli*;
- (b) providing a composition comprising a phytate-comprising feed;
- (c) contacting the phytase of (a) with the composition of (b) under conditions wherein the phytase catalyzes the hydrolysis of phytate, thereby making a feed lower in phytate content and higher in inorganic phosphorous content.

Claim 16 (Previously presented): The method of claim 15, wherein the phytase is encoded by a nucleic acid having a sequence as set forth in SEQ ID NO:1, or wherein the phytase has an amino acid sequence as set forth in SEQ ID NO:2.

Claim 17 (Previously presented): A method for supplementing the diet of an animal by increasing the amount of inorganic phosphorous in an ingested feed comprising feeding to the animal a composition comprising a recombinant phytase, wherein the recombinant phytase is encoded by a nucleic acid derived from an *E. coli*.

Claim 18 (Previously presented): The method of claim 17, wherein the phytase is encoded by a nucleic acid having a sequence as set forth in SEQ ID NO:1, or wherein the phytase has an amino acid sequence as set forth in SEQ ID NO:2.

Claim 19 (Currently amended): A food supplement comprising a composition comprising a recombinant phytase, wherein the recombinant phytase is encoded by a nucleic acid derived from ~~an *E. coli*~~ a bacteria.

Claim 20 (Currently amended): The food supplement of claim 19, wherein the phytase is encoded by a nucleic acid having a sequence as set forth in:

- a) SEQ ID NO:1 [[,]]; or
- b) SEQ ID NO:1, wherein T is substituted with U; or
- c) SEQ ID NO:1 from nucleotide 1 to 1296; or
- d) SEQ ID NO:1 from nucleotide 1 to 1296, wherein T is substituted with U;  
or wherein the phytase has an amino acid sequence as set forth in:
- e) SEQ ID NO:2; or
- f) SEQ ID NO: 2 from amino acids 1 to 432.

Claim 21 (Previously presented): The food supplement of claim 20, wherein the nucleic acid is expressed in a plant cell and the plant cell is fed to the animal.

Claim 22 (Previously presented): The food supplement of claim 21, wherein the plant cell comprises a transgenic plant or plant part.

Claim 23 (Previously presented): The food supplement of claim 19, wherein the composition comprises an aqueous liquid formulation.

Claim 24 (Currently amended): A drinkable foodstuff comprising a recombinant phytase, wherein the recombinant phytase is encoded by a nucleic acid derived from ~~an *E. coli*~~ a bacteria.

Claim 25 (Previously presented): The drinkable foodstuff of claim 24 comprising a liquor, a wine, a mixed alcoholic drink, a wine cooler, an alcoholic coffee, a beer, a near-beer, a juice, an extract, a homogenate or a puree.

Claim 26 (Previously presented): The feed of claim 9, wherein the nucleic acid is expressed in a cell lysate or equivalent.

Claim 27 (Previously presented): The feed of claim 10, wherein the cell is prokaryotic cell or a eukaryotic cell.

Claim 28 (Previously presented): The feed of claim 10, wherein the cell is a bacterial cell, a yeast cell, a plant cell, an insect cell, a fungal cell or an animal cell.

Claim 29 (Previously presented): The feed of claim 28, wherein the yeast cell is a *Saccharomyces* sp., a *Schwanniomyces* sp., a *Pichia* sp. yeast cell, a *Hansenula* sp. yeast cell, a *Candida* yeast cell or a *Torulopsis* sp. yeast cell.

Claim 30 (Previously presented): The feed of claim 29, wherein the yeast cell is a *Saccharomyces cerevisiae*, a *Schizosaccharomyces pombe*, a *Schwanniomyces occidentalis*, a *Pichia pastoris* or a *Hansenula polymorpha*.

Claim 31 (Previously presented): The feed of claim 28, wherein the bacterial cell is a gram negative bacteria or a gram positive bacteria.

Claim 32 (Canceled)

Claim 33 (Currently amended): The feed of claim 31, wherein the gram negative bacteria is [[a]] an *Escherichia coli* ~~or a *Pseudomonas fluorescens*~~.

Claim 34 (Previously presented): The feed of claim 31, wherein the gram positive bacteria is a *Streptomyces* sp., a *Lactobacillus* sp., a *Lactococcus* sp. or a *Bacillus* sp.

Claim 35 (Previously presented): The feed of claim 34, wherein gram positive bacteria is a *Lactobacillus gasseri*, a *Lactococcus lactis*, a *Lactococcus cremoris* or a *Bacillus subtilis*.

Claim 36 (Previously presented): The feed of claim 28, wherein the fungal cell is an *Aspergillus* sp.

Claim 37 (Previously presented): The feed of claim 36, wherein the fungal cell is an *Aspergillus terreus* or an *Aspergillus ficuum*.

Claim 38 (Previously presented): The feed of claim 8, wherein the nucleic acid comprises a cloning vehicle.

Claim 39 (Previously presented): The feed of claim 38, wherein the cloning vehicle comprises an expression cassette, a vector, a plasmid, a phage, a phagemid, a cosmid, a fosmid, a bacteriophage or an artificial chromosome.

Claim 40 (Previously presented): The feed of claim 8, wherein the polypeptide further comprises a signal peptide and the polypeptide is secreted by the cell.

Claim 41 (Currently amended): The feed of claim ~~[[8]]~~42, wherein the *E. coli* is an *Escherichia coli* B.

Claim 42 (New): The feed of claim 8, wherein the bacteria is *E. coli*.

Claim 43 (New): The feed of claim 13, wherein the bacteria is *E. coli*.

Claim 44 (New): The feed of claim 43, wherein the *E. coli* is an *Escherichia coli* B.

Claim 45 (New): The food supplement of claim 19, wherein the bacteria is *E. coli*.

Claim 46 (New): The food supplement of claim 45, wherein the *E. coli* is an *Escherichia coli* B.

Claim 47 (New): The drinkable foodstuff of claim 24, wherein the bacteria is *E. coli*.

Claim 48 (New): The drinkable foodstuff of claim 47, wherein the *E. coli* is an *Escherichia coli* B.

Claim 49 (New): The drinkable foodstuff of claim 24, wherein the phytase is encoded by a nucleic acid having a sequence as set forth in:

- a) SEQ ID NO:1; or
  - b) SEQ ID NO:1, wherein T is substituted with U; or
  - c) SEQ ID NO:1 from nucleotide 1 to 1296; or
  - d) SEQ ID NO:1 from nucleotide 1 to 1296, wherein T is substituted with U;
- or wherein the phytase has an amino acid sequence as set forth in:
- e) SEQ ID NO:2; or
  - f) SEQ ID NO: 2 from amino acids 1 to 432.